



New Partnership Approach and Potential Partnership Opportunities

presentation to the

Asteroid Initiative Idea Synthesis Workshop

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- Since 2011, the Satellite Servicing Capabilities Office (SSCO) at NASA's Goddard Space Flight Center has been developing a notional satellite-servicing initiative and fostering relationships with industry
- These studies resulted in an innovative public-private partnership procurement and acquisition approach that could potentially serve as an alternative vehicle for ARM partnerships
- Potential public-private partnership opportunities for ARM have been identified

A Public-Private Partnership Approach



The approach developed for the notional satellite-servicing initiative may provide an option for executing ARM partnerships:

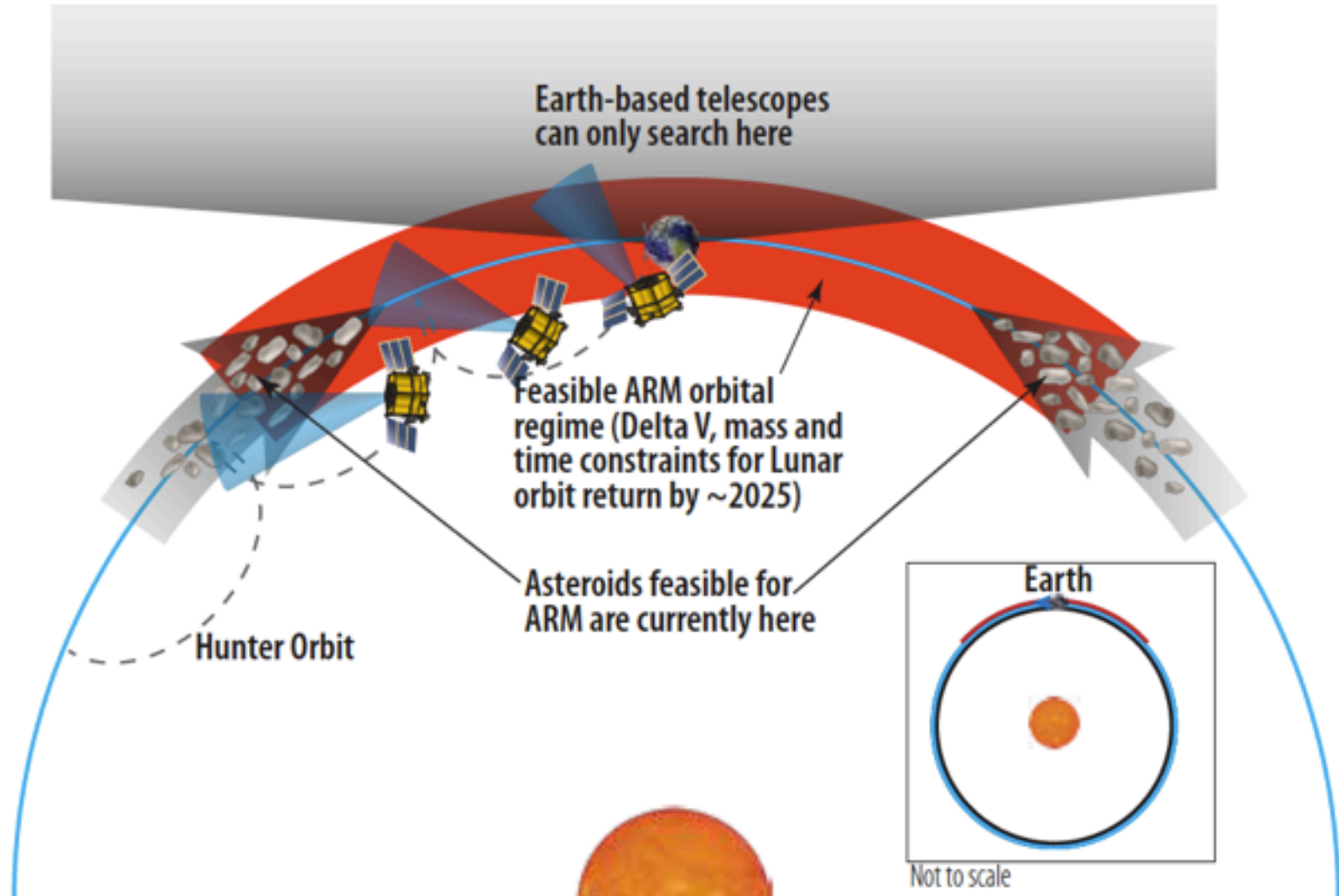
- A Cooperative Research and Development Agreement (CRADA) combined with a standard FAR contract, running in parallel, could address ARM needs and benefit Partner
 - CRADA allows guaranteed IP licensing to partner
 - Contract allows for bartering of services and hardware use
- The synergy created by developing an acquisition strategy that incorporates private-sector companies would provide more resources to address the common goals of public and private sectors
 - Use of existing hardware provided by commercial partner relieves schedule and funding pressure – only if NASA accepts commercial standards

Candidate Partnership Ideas



- Use of partner-provided hardware/services/expertise in exchange for on-orbit performance data and/or access to asteroid mass
 - Solar arrays
 - Asteroid/boulder capture mechanisms
 - Electric propulsion thrusters
 - Mining tools
- On-orbit telescope for asteroid data collection: data buy

Private-Sector Asteroid Prospector: Data Buy



- Public-private partnerships can yield significant benefits to both parties; however, they require significant time to cultivate and bring to fruition
- The proposed public-private partnership structure 'CRADA-FAR' potentially allows for additional/innovative ideas
- We are prepared to assist as desired to bring our experiences to the table